

Determinants of Foreign Direct Investment in Nigeria

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ABSTRACT

Extant literature is replete with the benefit of attracting Foreign Direct Investment (FDI) into an economy, it not only provides developing countries with the much needed capital for investment; it also enhances job creation, managerial skills as well as transfer of technology. However, attracting and sustaining FDI inflow in Nigeria have remained a teething problem. This study therefore examined the determinants of foreign direct investment in Nigeria. Specifically the study provides empirical evidence on the influence trade openness, market size, infrastructure, human capital, labour force, natural resources, exchange rate and inflation rate on Foreign Direct Investment (FDI) in Nigeria using an econometric regression technique of the Ordinary least square (OLS). The findings of the study also show that trade openness, market size, infrastructure, exchange rate and inflation rate are statistically significant in explaining the foreign direct investment in Nigeria while human capital, labour force and natural resources are statistically insignificant in explaining the growth of foreign direct investment in Nigeria. The study recommends that: The government should make policies that will create a business friendly environment to attract FDI inflows in economy. The government should provide the needed leadership and also ensure political stability in the country. This will attract investors to take the advantage of the market size of the country to FDI into the economy. The government should make policies that will favour trade openness. Trade openness is found to be factor that attracts investors invest in the country. This is lesser barriers to trade encourages investment and the government should provide the needed infrastructure. Necessary infrastructures that will reduce the cost of doing business should be the watch word of every government.

KEYWORDS: Foreign Direct Investment (FDI), Trade Openness, Market Size, Infrastructure, Human Capital, Labour Force, Natural Resources, Exchange Rate and Inflation Rate

1. INTRODUCTION

Foreign Direct Investment (FDI) has been variously described by scholar to represent the inflow of investment from one country to another country that is not that of the investor. According to The Financial Times (2019), a Foreign Direct Investment (FDI) is an investment in the form of a controlling ownership in a business in one country by an entity based in another country. It is thus distinguished from a foreign portfolio investment by a notion of direct control. It is also described as the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows of investment from the reporting economy to the rest of the world (World Data Atlas, 2017). Foreign Direct Investment (FDI) is the ownership or control of some portion of companies or firms by foreigners in a domestic economy (Oba & Onuoha, 2013). It consist of acquisition or creation of assets (e.g firm's equity, buildings, oil drilling rigs, etc) and in some cases these companies join together with the government of the domestic economy and termed

as joint ventures companies (Oba & Onuoha, 2013; Piana, 2005). Research has shown that this form of investment has contributed enormously to the growth of economies. According to Dembo and Nyambe (2016), many African governments lately have been committing stimulus at what they believe may attract foreign direct investors because of its contribution to the economy. It was also, argues that each country has its own attractions. Therefore what may drive FDI in one region may not drive it in another (Dembo & Nyambe, 2016; Asiedu, 2002).

In Nigeria, Foreign Direct Investment (FDI) has had a chequered history by witnessing a period of increase and a period of sharp decline of inflow of FDI into the economy. Before the year 1999, FDI inflows into Nigeria have had a very serious volatility. According to CBN (2006) as cited in Obida and Abu (2010), FDI inflows increased from N786.40 million in 1980 to N2, 193.40 million in 1982, but soon dropped to N1, 423.50 million in 1985. The value of FDI rose from N6, 236.70 million in 1988 to N10, 450.0 million and N55, 999.30million in 1990 and 1995, respectively. However, the value of FDI fell drastically to N5, 672.90

million in 1996 and further to N4, 035.50million in 1999. According to Obida and Abu (2010), the inflows of FDI has continued to rise since the year 2001, moving from N4,937.0million to N13,531.20million in 2003 and N20,064.40million in 2004. The FDI inflows stood at N41, 734.0million in 2006 (CBN, 2006). However, between the year 2007 and 2018, there is a serious volatility in FDI inflows in Nigeria. The amount of FDI inflow from 2007 to 2017 which was recorded in current USD dollars was 6,036,021,405 USD; 8,195,499,253 USD; 8,554,740,717 USD; 6,026,232,041 USD; 8,841,113,287 USD; 7,069,934,205 USD; 5,562,873,606 USD; 4,651,465,948 USD; 3,137,318,700 USD; 4,445,102,771 USD and 3,497,233,435 USD respectively (World Data Atlas, 2017). The years 2007-2009 recorded a percentage increase of 24.34 %, 35.78% and 4.38% respectively in the FDI inflow. Between 2012 and 2015 there was decline of FDI inflow of -20.03%, -21.32%, -16.38% and -32.55% respectively. There was a 41.68% increase in 2016 while the year 2017 saw a sharp decline of -21.32% in FDI inflow. The highest decline was in 2015 which arguably announced the moving of the country into recession. The sharp decline in the amount of FDI inflows in to the country in the year 2015 could be attributed to a number of factors which arguably was linked to political and leadership factor. However, a number of macroeconomic variables play significant role in attracting FDI in an economy.

Consequently, the relevance of foreign direct investment cannot be overemphasized. Its significant influence on the provision of new technologies, products, management skills and competitive business environment, overtime has been a strong impetus for economic growth. Many countries of the world, especially emerging economies favour policies that encourages the inflow of foreign direct investment because of its positive spillover associated with the provision of funds and expertise that could help smaller companies to expand and increase international sales and transfer of technology thus, forming new varieties of capital input (i.e. flow of services available for production from the stock of capital goods e.g. equipment, structures, inventories etc) that cannot be achieved through financial investments or trade in goods and services alone (Asogwa & Manasseh, 2014). Therefore, investigating factors that propels the inflows of FDI into the economy is imperative for the obvious economic growth and development reasons.

1.1. Statement of the Problem

This study was informed by the perceived rising level of job loss and economic strangulation in the country. It was reported that between the year 2015 and 2018, the country recorded over three million job loss thus increasing the rising level of unemployment in the country (NBS, 2018). This negative scenario that has also plunged the country into recession within the period is not unconnected with the huge amount of FDI that was withdrawn out of the economy between the year 2015 and 2018 thus suggesting that FDI plays significant role in the economic growth and development of any economy. According to Obida and Abu (2010), Foreign Direct Investment (FDI) not only provides developing countries (including Nigeria) with the much needed capital for investment, it also enhances job creation, managerial skills as well as transfer of technology. All of these contribute to economic growth and development. Attracting FDI requires a curious and committed effort in providing the needed leadership and enabling environment for such investment as well as policies (fiscal and monetary) that will attract FDI into the country. This study is therefore

an attempt to investigate variables that could be recommended for attracting FDI inflow in Nigeria.

1.2. Objectives of the Study

The main objective of the study is to examine the determinants of foreign direct investment in Nigeria. Specifically the study intends to ascertain the influence trade openness, market size, infrastructure, human capital, labour force, natural resources, exchange rate and inflation rate on Foreign Direct Investment (FDI) in Nigeria.

2. EMPIRICAL LITERATURE

Arawomo and Apanisile (2018) investigated the key determinants of FDI in the Nigerian telecommunication sector using time series data spanning from 1986 to 2014. The study modelled annual data on infrastructure, government expenditure, trade openness and market size, FDI flow into telecommunication sector, foreign exchange rate, interest rate and inflation. The analysis was done using graphs, t-test and Autoregressive Distributed Lag (ARDL). The results showed that the key determinants of FDI in the sector are market size and trade openness ($t = 5.75$ to 9.05 ; $p < 0.05$) on positive side, as well as Inflation and real interest rate ($t = -0.05$ to -4.03 ; $p < 0.05$) on negative side. Akanegbu and Chizea (2017) investigated foreign direct investment and economic growth in Nigeria: An empirical analysis using regression techniques. The results of the estimation analysis obtained revealed that there exists a positive relationship between FDI and output growth in the Nigerian economy. Gandu and Yusha'u (2017) carried out an analysis of the impact of foreign direct investment on economic growth in Nigeria using a quarterly secondary time series data over the period 2009Q₁ to 2016Q₄ and autoregressive Distributed Lag (ARDL) approach to Co-integration and Error Correction (ARDL-VECM) Model, developed by Pesaran, Shin and Smith (2001). The results indicate a long-run relationship between FDI, economic growth, exchange rate, interest rate and inflation rate. Also, the study further reveals a negative impact between FDI, exchange rate, interest rate, and inflation rate on economic growth. Moreover, the coefficient of error correction model (ECM) suggests that the speed of adjustment in the estimated model had the expected level significance and negative sign. However, the Granger causality test result reveals unidirectional causality relationship running from FDI inflow to economic growth in Nigeria. This analysis included inflation rate, interest rate, exchange rate and FDI as independent variables, while economic growth as dependent variable. Major findings of this study included that FDI inflow has significant negative impact on economic growth in both short run and the long run. Results demonstrate that FDI, exchange rate, interest rate and inflation deter economic growth. As such, a major challenge before the policy managers therefore, is to attain a stable and realistic exchange rate, lower interest rate and moderate inflation rate that will encourage foreign investors to improve the economic growth in Nigeria.

Enisan (2017) examined the determinants of foreign direct investment in Nigeria using Markov- Regime Switching Model (MSMs). The paper adopts maximum likelihood methodology of Markov-Regime Model (MSM) to identify possible structural changes in level and/or trends and possible changes in parameters of independent variables through the transition probabilities. The results show that FDI process in Nigeria is governed by two different regimes and a shift from one regime to another regime depends on transition probabilities. The results show that the main

determinants of FDI are GDP growth, macro instability, financial development, exchange rate, inflation and discount rate. Achugamonu, Ikpefan, Taiwo and Okorie (2016) examined constraints to foreign direct investment: The Nigerian experience (1980 - 2015) using Vector Error Correction Model was used to establish the short run dynamics and the long run relationship as well as ascertain the speed of systemic adjustment in the model. The study found that government external and domestic debts, inflation rate and exchange rate appreciation (in favour of the domestic currency) have significant long run relationship with foreign direct investment in Nigeria. Dembo and Nyambe (2016) investigated the determinants of foreign direct investments in Namibia using data covering the period 1984 to 2014. The study employed an Error Correction regression Model. The short run and long run scenarios were captured and yielded that in the short run, a depreciation of the Namibian dollar was found to positively impact on the receipts of FDI. Inflation and GDP growth were found to impact positively on FDI in the short and long run scenarios. Though statistically insignificant, population growth was found to be a positive driver while exchange rate was negatively related to FDI in a short-run. An existence of a long run relationship among the variables was also confirmed. As for the long run, population growth was negatively impacting on the attraction of FDI. With the Namibian dollar pegged to the South African Rand at 1:1, inflation was seen to have a positive impact on FDI in both periods. A positive sign for inflation is not necessarily a doubtful finding in the short-run period, considering that the opposite of it can be serious on the economy.

Using the ordinary least square multiple regression statistical technique, Ojong, Arikpo & Ogar (2015) examined the determinants of Foreign Direct Investment Inflow to Nigeria with a time series data for the period between 1983 and 2013. Result on the basis of the OLS revealed that there is a large inverse effect of market capitalization and gross fixed capital formation on FDI inflow in Nigeria. Also an over liberal trade policy is a disincentive for foreign direct investment in Nigeria. Finally, there exists a significant positive effect of level of economic growth on FDI attraction in Nigeria. On the basis of the ADF and PP test, all variable were stationary at first difference. Again, on the basis of the correlation matrix, all variables were strongly related except market capitalization, gross fixed capital formation and level of economic activities which had weak relation with FDI. Okonkwo, Egbunike and Udeh (2015) investigated foreign direct investment and economic growth in Nigeria using annual time series data spanning from the period 1990 to 2012. The study made use of ordinary least squares (OLS) estimation techniques. The result shows that export assumes a positive sign which implies that there is a positive relationship between economic growth and export. Asogwa and Manasseh (2014) examined the impact of foreign direct investment on economic growth in Nigeria using quarterly data covering the period 1980Q1-2009Q4 and econometric regression model. The empirical evidence shows that FDI into manufacturing and telecommunication sector has positive impact on economic growth in Nigeria while FDI into agricultural sector impacted on economic growth negatively. The findings on granger causality suggest that FDI into agriculture, manufacturing and telecommunication sector have a unidirectional relationship with economic growth in Nigeria. Institution or legal framework has positive and significant influence on the inflow of FDI hence

suggesting the need for strong legal framework for property right protection could serve as an incentive to attract more foreign investors. Political instability and real exchange rate significantly and negatively influences the inflow of FDI vis-a-vis signifying the importance of friendly business environment in the country. Onyali and Okafor (2014) investigated the nexus between foreign direct investment (FDI) and the vision 2020 economic growth target of Nigeria using Ordinary Least Square regression technique and equations. From the findings, it was discovered that increased inflow of FDI in Nigeria is a major pathway towards achieving the vision 2020 economic growth target. Using co-integration and error correction model, Maghori (2014) investigated the determinants of Foreign Direct Investment in Nigeria with annual time series data for the periods 1970 to 2010. The results show that the major determinant of foreign capital inflow in the economy is the ratio of external debt to Gross Domestic Product both in the short run and long run. However, some factors such as the size of the national income, the degree of openness to trade, the existing stock of foreign capital in the previous period, inflation rate and exchange rate are well maintained through to the long run.

Ndem, Okoronkwo and Nwamuo (2014) examined the determinants of foreign direct investment and their impacts on Nigerian Economy. The study investigated how exchange rate, market size (GDP), investment in infrastructure, openness and political risks have impacted on the flow of FDI in Nigeria from 1975 - 2010 using Ordinary Least Square (OLS), and co-integration Error Correction Method (ECM) we found out that Market Size (GDP), openness, and exchange rate impact much on FDI inflow while political risk was unfavourable to it. Investment in infrastructure was discovered to be favourable but its level is inadequate to improve FDI required for sustainable growth and development. We therefore recommend improvement in infrastructural development and technological development through knowledge spill over, maintaining a conducive political and social environment for development. Oba and Onuoha (2013) examined factors that influence the foreign direct investment in Nigeria and their impact on the economy using data covering the period 2001 -2010 and considered such variables such as real GDP, inflationary levels, openness of trade, electricity consumption, transport and communication. Econometric model and regression analysis were employed to analyse the data. The results based on the value of F-statistics (35.83) and the co-efficient of determination (R²) of 0.98 revealed that the model was well specified and that the explanatory variables are sufficient to explain the inflow of FDI to Nigeria. The negative values of parameters such as the real GDP, inflation and electricity consumption call for policy reconsiderations. Ugwuegbe, Okore and Onoh (2013) examined the impact of foreign direct investment on the Nigerian Economy. The work covered a period of 1981-2009 using an annual data from Central Bank of Nigeria statistical bulletin and a growth model via the Ordinary Least Square method. The result of the OLS techniques indicates that FDI has a positive and insignificant impact on the growth of Nigerian economy for the period under study. Obida and Abu (2010) carried out an empirical analysis of the determinants of foreign direct investment in Nigeria using the error correction technique. The study analyzed the relationship between foreign direct investment and its determinants. The results reveal that the market size of the host country, deregulation, political

instability, and exchange rate depreciation are the main determinants of foreign direct investment in Nigeria.

In the final analysis, literatures on determinants of foreign direct investment are rife with robust and insightful findings. However, there is an asymmetry in the methodology, variables and area in which the studies are carried out. Among the studies carried out in Nigeria, none of them capture the era (2015-2018) in which there was a serious decrease and withdrawal of FDI in the country and the factors that propelled the withdrawal. This therefore warrants an empirical investigation in ascertaining the determinants of foreign direct investment in Nigeria covering the period 1999-2018.

3. METHODOLOGY

3.1. Model Specification

This study modeled variables like trade openness, market size, infrastructure, human capital, labour force, natural resources, exchange rate and inflation rate as the determinants of foreign direct investment in Nigeria. Thus, foreign direct investment will be the dependent variable while the explanatory variables include trade openness, market size, infrastructure, human capital, labour force, natural resources, exchange rate and inflation rate. Therefore, the model for this study is stated as followed:

The functional form of the model is:

$$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8) \quad (1)$$

The mathematical form of the model is specified as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 \quad (2)$$

The econometric form of the model is thus:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \mu \quad (3)$$

Where

Y = Foreign Direct Investment

X₁ = Trade Openness

X₂ = Market Size

X₃ = Infrastructure

X₄ = Human Capital

X₅ = Labour Force

X₆ = Natural Resources

X₇ = Exchange Rate

X₈ = Inflation Rate

4. PRESENTATION OF EMPIRICAL RESULTS

4.1 Summary of Stationary Unit Root Test

Establishing stationarity is essential because if there is no stationarity, the processing of the data may produce biased result. The consequences are unreliable interpretation and conclusions. We test for stationarity using Augmented Dickey-Fuller (ADF) tests on the data. The ADF tests are done on level series, first and second order differenced series. The decision rule is to reject stationarity if ADF statistics is less than 5% critical value, otherwise, accept stationarity when ADF statistics is greater than 5% criteria value. The result of regression is shown in table 1 below.

Table 1: Summary of ADF test results

Variables	ADF Statistics	Lagged Difference	1% Critical Value	5% Critical Value	10% Critical Value	Order of Integration
FDI	-6.465304	1	-3.661661	-2.960411	-2.619160	I(1)
TOP	-6.369529	1	-3.661661	-2.960411	-2.619160	I(1)
MAS	-9.253889	1	-3.653730	-2.957110	-2.617434	I(1)
INFRA	-4.864043	1	-3.653730	-2.957110	-2.617434	I(1)
HUM	-6.153296	1	-3.661661	-2.960411	-2.619160	I(1)
LAB	-4.527896	1	-3.653730	-2.957110	-2.617434	I(1)
NATR	-6.215947	1	-3.653730	-2.957110	-2.617434	I(1)
EXCH	-5.229408	1	-3.653730	-2.957110	-2.617434	I(1)
INFL	-5.813439	1	-3.661661	-2.960411	-2.619160	I(1)

Source: Researchers computation

β_0 = Intercept

$\beta_1 - \beta_8$ = Partial slope coefficients or Parameters of the model

μ_i = Stochastic error term, which is normally distributed.

The economic technique employed in the study is the Ordinary Least Square (OLS). This is because the OLS computational procedure is fairly simple and a best linear estimator among all unbiased estimation, efficient and shown to have the smallest (minimum variance) thus, it become the best linear unbiased estimator (BLUE) in the classical linear regression (CLR) model. Basic assumptions of the OLS are related to the forms of the relationship among the distribution of the random variance (μ_i). OLS is a very popular method and in fact, one of the most powerful methods of regression analysis. It is used exclusively to estimate the unknown parameters of a linear regression model. The Economic views (E-views) software was adopted for regression analysis in this study.

3.2. Stationarity (unit root) test

The importance of this test cannot be overemphasized since the data to be used in the estimation are time-series data. In order not to run a spurious regression, it is worthwhile to carry out a stationary test to make sure that all the variables are mean reverting that is, they have constant mean, constant variance and constant covariance. In other words, that they are stationary. The Augmented Dickey-Fuller (ADF) test would be used for this analysis since it adjusts for serial correlation.

Decision rule: If the ADF test statistic is greater than the MacKinnon critical value at 5% (all in absolute term), the variable is said to be stationary. Otherwise it is non stationary.

3.3. Cointegration test

Econometrically speaking, two variables will be cointegrated if they have a long-term, or equilibrium relationship between them. Cointegration can be thought of as a pre-test to avoid spurious regressions situations. As recommended by Gujarati and Porter (2009), the ADF test statistic will be employed on the residual.

Decision Rule: if the ADF test statistic is greater than the critical value at 5%, then the variables are cointegrated (values are checked in absolute term)

Evidence from unit root table above shows that none of the variables are stationary at level difference that is, $I(0)$, rather all the variables are stationary at first difference, that is, $I(1)$. Since the decision rule is to reject stationarity if ADF statistics is less than 5% critical value, and accept stationarity when ADF statistics is greater than 5% criteria value, the ADF absolute value of each of these variables is greater than the 5% critical value at their first difference but less than 5% critical value in their level form. Therefore, they are all stationary at their first difference integration.

4.2 Summary of Cointegration Test

Cointegration means that there is a correlation among the variables. Cointegration test is done on the residual of the model. Since the unit root test shows that none of the variable is stationary at level $I(0)$ but stationary at first difference $I(1)$, we go further to carry out the cointegration test. The essence is to show that although all the variables are stationary, whether the variables have a long term relationship or equilibrium among them. That is, the variables are cointegrated and will not produce a spurious regression. The result is summarized in tables 2 below for Trace and Maximum Eigenvalue cointegration rank test respectively.

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.910514	277.1859	197.3709	0.0000
At most 1 *	0.820296	199.9482	159.5297	0.0000
At most 2 *	0.727523	145.0219	125.6154	0.0019
At most 3 *	0.667972	103.4155	95.75366	0.0134
At most 4	0.577501	68.13435	69.81889	0.0676
At most 5	0.471838	40.56413	47.85613	0.2029
At most 6	0.266679	20.13684	29.79707	0.4136
At most 7	0.210915	10.21135	15.49471	0.2648
At most 8	0.078934	2.631169	3.841466	0.1048

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.910514	77.23767	58.43354	0.0003
At most 1 *	0.820296	54.92629	52.36261	0.0267
At most 2	0.727523	41.60643	46.23142	0.1441
At most 3	0.667972	35.28116	40.07757	0.1573
At most 4	0.577501	27.57022	33.87687	0.2340
At most 5	0.471838	20.42729	27.58434	0.3123
At most 6	0.266679	9.925489	21.13162	0.7516
At most 7	0.210915	7.580183	14.26460	0.4230
At most 8	0.078934	2.631169	3.841466	0.1048

Source: Researchers computation

Table 2 indicates that trace have only 4 cointegrating variables in the model while Maximum Eigenvalue indicated only 2 cointegrating variables. Both the trace statistics and Eigen value statistics reveal that there is a long run relationship between the variables. That is, the linear combination of these variables cancels out the stochastic trend in the series. This will prevent the generation of spurious regression results. Hence, the implication of this result is a long run relationship between foreign direct investment and other variables used in the model.

Having verified the existence of long-run relationships among the variables in our model, we therefore, subject the model to ordinary least square (OLS) to generate the coefficients of the parameters of our regression model. The result summary of the regression test is shown in table 3 below.

Table 3: Summary of regression results
Dependent Variable: FDI
Method: Least Squares
Sample: 1999 2018
Included observations: 21

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	225.0446	2.974565	11.56563	0.0000
TOP	0.274235	1.032979	8.026548	0.0090
MAS	709.4449	1.341565	5.528819	0.0016
INFRA	23.58039	1.759135	4.340454	0.0022

HUM	294.1750	3.778510	0.778548	0.4436
LAB	25.52904	2.645770	0.964900	0.3438
NATR	153.5917	1.655557	0.927734	0.3624
EXCH	-130.3381	2.112658	-3.430297	0.0050
INFL	-56.90844	4.506256	-3.669019	0.0096
<hr/>				
R-squared	0.769797	F-statistic	63.72141	
Adjusted R-squared	0.709868	Prob(F-statistic)	0.000000	
S.E. of regression	75.16066	Durbin-Watson stat	2.435175	

Source: Researchers computation

4.3 Discussion of Findings

To discuss the regression results as presented in table 4.3 (see also, appendix 4), we employ economic a priori criteria, statistical criteria and econometric criteria.

Discussion based on economic a priori criteria

This subsection is concerned with evaluating the regression results based on a priori (i.e., theoretical) expectations. The sign and magnitude of each variable coefficient is evaluated against theoretical expectations. From table 3, it is observed that the regression line have a positive intercept as presented by the constant (c) = 225.0446. This means that if all the variables are held constant or fixed (zero), FDI will be valued at 225.0446. Thus, the a-priori expectation is that the intercept could be positive or negative, so it conforms to the theoretical expectation. It is observed in table 3 that trade openness, market size, infrastructure, human capital, labour force and natural resources have a positive impact on foreign direct investment while exchange rate and inflation rate have a negative impact on foreign direct investment in Nigeria, although, exchange rate was expected to be either positive or negative. This implies that a unit increase in trade openness, market size, infrastructure, human capital, labour force and natural resources, will lead to an increase in the FDI in Nigeria. On the other hand, increases in exchange rate and inflation rate will lead to a decrease in the FDI.

Discussion based on statistical criteria

This subsection applies the R^2 , adjusted R^2 , the S.E and the f-test to determine the statistical reliability of the estimated parameters. These tests are performed as follows:

From our regression result, the coefficient of determination (R^2) is given as 0.769797, which shows that the explanatory power of the variables is very high and/or strong. This implies that 77% of the variations in the growth of the foreign direct investment are being accounted for or explained by the variations in trade openness, market size, infrastructure, human capital, labour force, natural resources, exchange rate and inflation rate in Nigeria. While other determinants of FDI not captured in the model explain just 23% of the variation in foreign direct investment in Nigeria. The adjusted R^2 supports the claim of the R^2 with a value of 0.709868 indicating that 71% of the total variation in the dependent variable (economic growth is explained by the independent variables (the regressors)). Thus, this supports the statement that the explanatory power of the variables is very high and strong.

The standard errors as presented in table 3 show that all the explanatory variables were all low. The low values of the standard errors in the result show that some level of confidence can be placed on the estimates. The F-statistic:

The F-test is applied to check the overall significance of the model. The F-statistic is instrumental in verifying the overall significance of an estimated model.

5. CONCLUSION AND RECOMMENDATIONS

The study attempted to explain the determinants of foreign direct investment in Nigeria from 1999 -2018 using Ordinary least Square (OLS) technique method. All data used are secondary data obtained from the Statistical Bulletin of Central Bank of Nigeria (CBN) and other relevant literature. In executing the study, the OLS techniques was applied after determining stationarity of our variables using the ADF Statistic, as well as the cointegration of variables using the Johansen approach and was discovered that the variables are stationary and have a long term relationship among the variables in the model. From the result of the OLS, it is observed that trade openness, market size, infrastructure, human capital, labour force and natural resources have a positive impact on foreign direct investment while exchange rate and inflation rate have a negative impact on foreign direct investment in Nigeria, although, exchange rate was expected to be either positive or negative. This implies that a unit increase in trade openness, market size, infrastructure, human capital, labour force and natural resources, will lead to an increase in the foreign direct investment in Nigeria. On the other hand, increases in exchange rate and inflation rate will lead to a decrease in the foreign direct investment in Nigeria.

From the regression analysis, the result show that all the variables conform to the a priori expectation of the study which indicates that trade openness, market size, infrastructure, human capital, labour force, natural resources, exchange rate and inflation rate are good determinants of foreign direct investment in Nigeria. The F-test conducted in the study shows that the model has a goodness of fit and is statistically different from zero. In other words, there is a significant impact between the dependent and independent variables in the model.

The findings of the study also show that trade openness, market size, infrastructure, exchange rate and inflation rate are statistically significant in explaining the foreign direct investment in Nigeria while human capital, labour force and natural resources are statistically insignificant in explaining the growth of foreign direct investment in Nigeria. Finally, the study shows that there is a long run relationship exists among the variables. Both R^2 and adjusted R^2 show that the explanatory power of the variables is very high and/or strong. The standard errors show that all the explanatory variables were all low. The low values of the standard errors in the result show that some level of confidence can be placed on the estimates.

The most significant factors that determine the performance of foreign direct investment in Nigeria according to our findings are trade openness, market size, infrastructure, exchange rate and inflation rate which were statistically significant as a result of our decision rule applied. But this is not undermining the effect of others variables used during the study period which have in one way or the other affected the determinants of the performance of FDI. To increase the inflow of FDI and its performance, the study recommends that:

1. The government should make policies that will create a business friendly environment to attract FDI inflows in economy.
2. The government should provide the needed leadership and also ensure political stability in the country. This will attract investors to take the advantage of the market size of the country to FDI into the economy.
3. The government should make policies that will favour trade openness. Trade openness is found to be factor that attracts investors invest in the country. This is lesser barriers to trade encourages investment.
4. The government should provide the needed infrastructure. Necessary infrastructures that will reduce the cost of doing business should be the watch word of every government.

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